• *Low $R_{DS(on)}$ @V_{GS}=-10V*

$V_{(BR)DSS}$	$R_{DS(ON)}$ Typ	I_D Max
-30V	55mΩ @-10V	-4.2A
	65mΩ @ -4.5V	

Applications

• Load Switch
Switching circuits
High-speed line driver
Power Management Functions

Order Information **SOT23-3**

Product	Package	Marking	Packing
	SOT23-3	A19T	3000PCS/Reel

Absolute Maximum Ratings

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Symbol	Parameter		Rating	Unit
Common Ratings (T_A=25°C Unless Otherwise Noted)				
V_{GS}	Gate-Source Voltage		±12	V
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage		-30	V
T_J	Maximum Junction Temperature		150	°C
T_{STG}	Storage Temperature Range		-50 to 150	°C
Mounted on Large Heat Sink				
I_{DM}	Pulse Drain Current Tested	T_A=25°C	-16.8	A
I_D	Continuous Drain Current	T_A=25°C	-4.2	A
		T_A=70°C	-3.2	
P_D	Maximum Power Dissipation	T_A=25°C	1.2	W
		T_A=70°C	0.9	
R_{JA}	Thermal Resistance Junction-Ambient		100	°C/W

Symbol	Parameter	Condition	Min	Typ	Max	Unit
Static Electrical Characteristics @ T_J = 25°C (unless otherwise stated)						
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}=0V I_D=-250μA	-30	--	--	V
I_{DSS}	Zero Gate Voltage Drain Current(T_A=25)	V_{DS}=-30V, V_{GS}=0V	--	--	-1	μA
	Zero Gate Voltage Drain Current(T_A=125)	V_{DS}=-24V, V_{GS}=0V	--	--	-100	uA
I_{GSS}	Gate-Body Leakage Current	V_{GS}=±12V, V_{DS}=0V	--	--	±100	nA
$V_{GS(TH)}$	Gate Threshold Voltage	V_{DS}=V_{GS}, I_D=-250μA	-0.5	-0.7	-1.5	V
$R_{DS(ON)}$	Drain-Source On-State Resistance	V_{GS}=-10V, I_D=-4.2A	--	55	70	mΩ
$R_{DS(ON)}$	Drain-Source On-State Resistance	V_{GS}=-4.5V, I_D=-4A	--	65	90	
$R_{DS(ON)}$	Drain-Source On-State Resistance	V_{GS}=-3.3V, I_D=-2A	--	85	120	mΩ
Dynamic Electrical Characteristics @ T_J = 25°C (unless otherwise stated)						
C_{iss}	Input Capacitance	V_{DS}=-15V, V_{GS}=0V, f=1MHz	--	710	--	pF
C_{oss}	Output Capacitance		--	90	--	pF
C_{rss}	Reverse Transfer Capacitance		--	40	--	pF
Q_g	Total Gate Charge	VDS				

Packaging Information

SOT23-3L

